

### Abstract of the Disclosure

A method and apparatus for determining a communication path over a network are provided. The method involves generating a spanning tree having connection devices over a network as vertices and having links among the connection devices as edges; allotting predetermined vertex information to each vertex on the spanning tree; detecting all circuits having a plurality of communication paths among the connection devices over the network corresponding to the spanning tree; and applying rapid ring spanning tree protocol (RRSTP) to links corresponding to the detected circuits and applying rapid spanning tree protocol (RSTP) to links not corresponding to the detected circuits.